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Generative AI as a Catalyst for Business Model Innovation: Opportunities, Challenges, and Strategic Implications

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Abstract

Generative AI is becoming a new business model innovation (BMI) engine in almost every industry, fundamentally transforming the way businesses create, deliver and capture value. Generative models can automate content production, assist with decision-making, and provide hyper-personalized experiences at scale, which, in turn, save time and money in experimentation and accelerate the development of new customer propositions, new business models and new revenue streams. Our experience, backed by empirical studies, points to the fact that companies are most willing to innovate on value creation activities (e.g., design, content and process automation) but struggle more significantly with reconfiguration of elements associated with the much less attractive innovation on value propositions and capturing mechanisms in particular for incumbent organizations. However, the impact of Generative AI also has significant negative consequences including data quality and governance concerns, algorithmic bias, threats to IP rights, regulatory uncertainty, and disruption of the workforce.

Keywords: *Generative AI, Business Model Innovation, Value Creation, Value Proposition, Value Capture, Strategic Innovation.*

Introduction

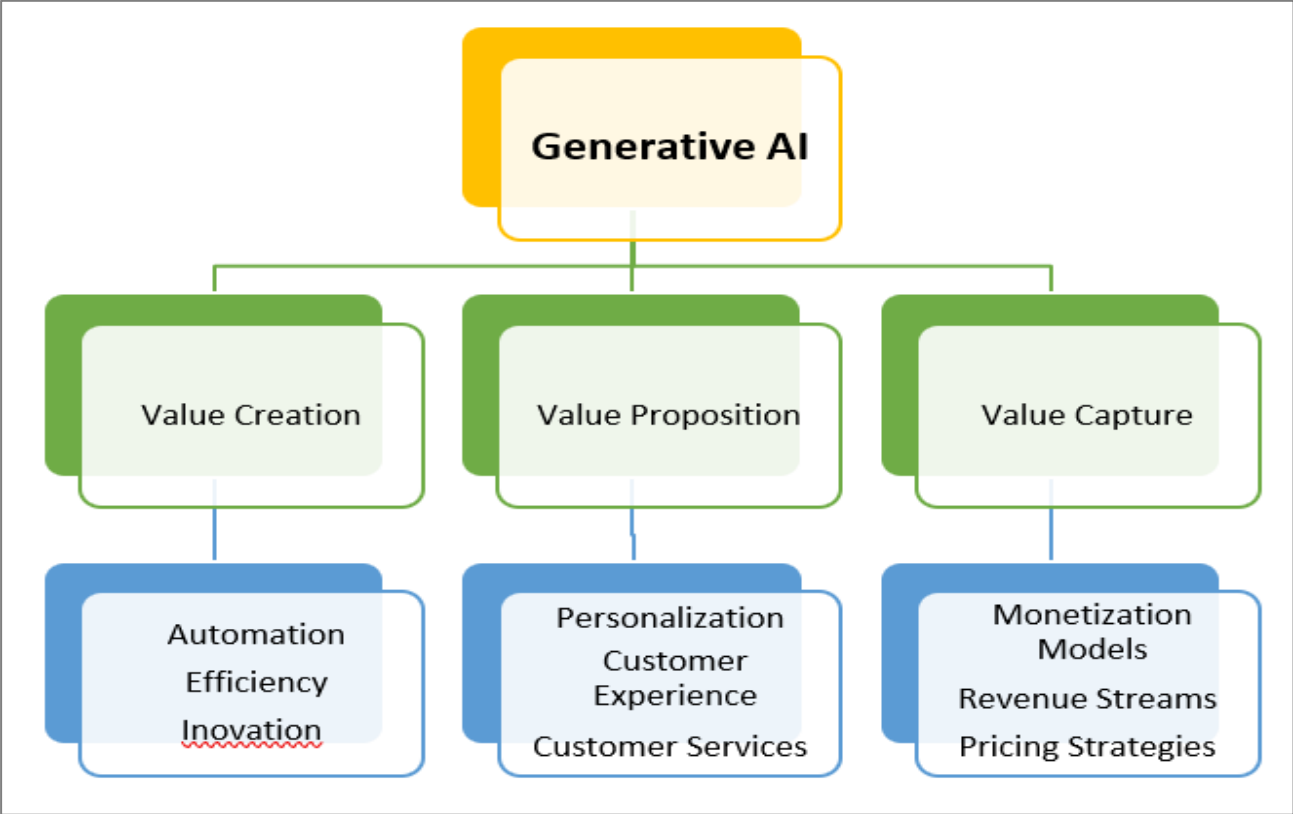
The rapid advancements of generative AI technology have thrown a spanner in the works of how organizations create innovative solutions. While traditional formats of artificial intelligence systems focus on analyzing the data and predict outcomes, generative AI systems generate new information, designs and solutions.

Business Model Innovation (BMI) is the process of organizational innovation when changing its business model in terms of value creation, value delivery and

value capture. But as the business world becomes increasingly competitive and new businesses such as digitization companies have to be alert and constantly tweaking their business model if they want to land on the top spot. Generative AI is an enabler of this shift and will help realize faster experimentation, reduced operating costs and new metrics of product & service innovation. This paper delves into the implications of generative AI for business model innovation and its potential and challenges.

Generative AI affects all three key parts of business models: value creation, value proposition and value capture (Kanbach et al., 2024).

Figure 1 Impact of Generative AI on Business Model Innovation Dimensions



Source: Adapted from Kanbach et al. (2024); Feuerriegel et al. (2024)

Review of Literature

Literature focused on business models suggests that in order to have a sustainable competitive advantage, it is important to innovate based on the business model. The previous studies indicated that innovation is not only products or technologies; it's also about how the business is being done, some value was being added.

The recent studies reveal how generative AI is enabling organizations to discover new capabilities, automating knowledge-intensive tasks that allow supporting personalizing user best experience.

The potential challenges and opportunities of generative AI adoption have been identified in previous research (Feuerriegel et al., 2024).

TABLE 1 Summary of Key Literature on Generative AI and Business Innovation

Author(s)	Year	Focus Area	Key Contribution
Kanbach et al.	2024	Business Models	AI-driven BMI transformation
Cillo & Rubera	2025	Marketing	AI in innovation processes
Feuerriegel et al.	2024	AI Overview	Capabilities & risks
Haefner & Gassmann	2023	Business Models	AI-enabled innovation
McKnight et al.	2024	Review Study	Framework & analysis

Source: Compiled by authors based on existing literature.

Research Methodology

The research method used in this research is qualitative research literature review, which aims to analyze and identify generative artificial intelligence and business model innovation. We subsequently studied the relevant published academic works, such as IEEE, Springer and Google Scholar.

Generative AI and the Dimensions of Business Model Innovation

The three components of business model innovation are value creation, value proposition and value capture. Each of the above dimensions is affected by Generative AI in various ways.

When it comes to value creation, generative AI streamlines the practices of content production, product development and big data assimilation to their innermost dimensions within the organization.

Opportunities of Generative AI in Business Model Innovation

There are unprecedented possibilities for innovation and growth through generative AI for organizations. New product and service development is the most important opportunity. Businesses can create AI-powered applications like virtual assistants, content builders, design platforms with a mind. AI can

be used to create tools for businesses, such as virtual assistants and content generators, or design platforms with a mind.

The other impressive sign of the data is the boost of operational efficiency that automation provides in October 2023 data. It cuts down an organization's expenses and time because of the absence of a human hand to perform repetitive tasks.

Last but not least, generative AI promotes a culture of experimentation. This enables organizations to explore new ideas rapidly and more cheaply, and adapt to changes in the marketplace faster

A summary of the main opportunities provided by generative AI is provided below:

TABLE 2 Opportunities of Generative AI in Business Model Innovation

Opportunity	Description
New Product Development	AI-powered tools and services
Personalization	Customized user experiences
Operational Efficiency	Automation reduces cost & time
Platform Models	Ecosystem-based innovation
Experimentation	Faster testing and innovation

Source: Developed by authors based on literature.

Challenges and Risks

While generative AI has its advantages, there are also some drawbacks that organizations need to be aware of. Data quality and governance is one of the main concerns. AI systems are heavily dependent on data sets and the quality of the data, as well as its accuracy and security, can have a significant effect on results.

He also emphasized ethical issues and biases in AI systems. AI models are trained on existing data, which can lead to the reinforcement and perpetuation of existing biases. This can result in unfair or discriminatory outcomes that can impact an organization's reputation.

While information generated by generative AI has its benefits, there are also several risks involved, which are outlined below.

TABLE 3 Challenges and Risks of Generative AI Adoption

Challenge	Description
Data Issues	Quality, privacy, governance
IP Concerns	Ownership of AI-generated content
Bias & Ethics	Risk of unfair outcomes
Organizational Barriers	Resistance, lack of skills
Workforce Impact	Job displacement

Source: Adapted from McKnight et al. (2024).

Strategic Implications

There is a great deal more for chiefs to play in optimizing the value of the generative AI and a clear plan required if organizations wish to put their generative AI to the very best use. Incorporating AI into its core activities is essential for ensuring the viability and competitiveness of a smart brand.

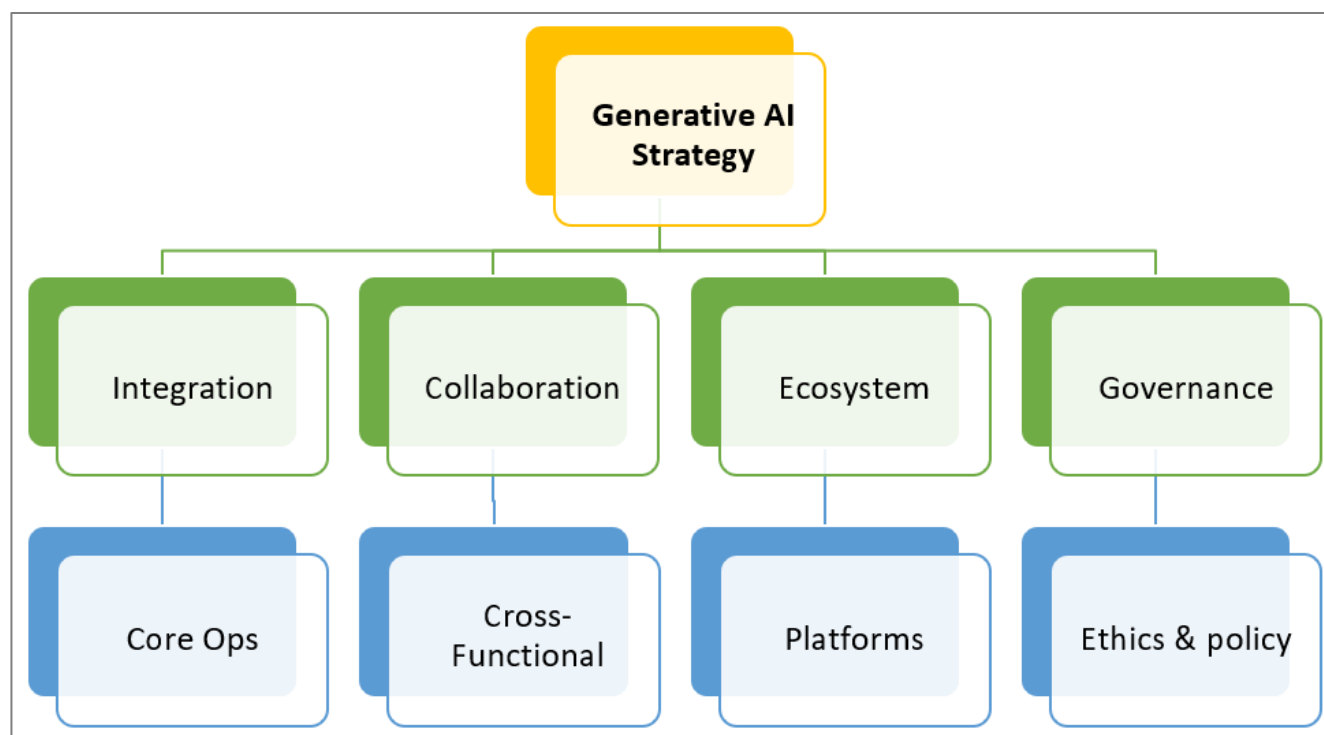
Cooperation among the staff in various disciplines is also important. To successfully implement it, you must have experts in technology, business, and the domain.

Finally, however, emphasis will be placed on regulatory and policy issues. That is where clear guidance and frameworks will be vital to ensure that

the use of sum generative ai is responsible and ethical.

The following demonstrates how an organization can make strategic decisions to success with AI.

FIGURE 3 Strategic Framework for Generative AI Implementation



Source: Developed by authors.

Conclusion and Future Research

With the aid of greater operational efficiencies, it's generative AI that is shaping the paradigm shift in business model innovation regarding creating value in new ways. However, good governance, ethical and workforce disruption challenges must be addressed with care to realize its potential.

Long-term and industry-specific applications of generative AI, the economic impact of generative AI, regulatory implications – all of these are potential avenues for future research. To create sustainable and inclusive business ecosystems powered by AI, the innovation must be combined with a responsible approach to its execution.

Declarations

Author Contributions

Ayushi Rajput contributed to the conceptualization of the study, literature review, analysis, and preparation of the manuscript. Disha Bansal contributed to the literature review, interpretation of the findings, and

critical revision of the manuscript. Manju Bansal contributed to the conceptual framework, synthesis of the literature, interpretation of the findings, and critical revision of the manuscript. All authors reviewed and approved the final version of the manuscript.

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Conflict of Interest

The authors declare that they have no conflict of interest, financial or otherwise, that could have influenced the research, analysis, or presentation of this article.

Generative AI Statement

During the preparation of this manuscript, the authors did not use generative artificial intelligence tools to generate, analyze, or interpret the research findings. The authors remain fully responsible for the content, accuracy, originality, and integrity of the manuscript.

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